

## ABSTRACT OF THE DISCLOSURE

This invention has as its object to provide a color separation table generation method which can improve grayscale characteristics and can suppress generation of a pseudo edge of a reproduced image by introducing a nonlinear interpolation method using a finite element method. To this end, according to the present invention, a color separation table generation method of generating a color separation table used to separate an input color into a plurality of color agent colors, includes: a first table generation step of generating color separation data on a first line that connects white and black points in the color separation table; a second table generation step of generating color separation data on a plurality of second lines each of which connects the white point and each of primary color points each expressed by one of the color agent colors and secondary color points each expressed by two of the color agent colors; a third table generation step of generating color separation data on a plurality of third lines each of which connects each of the primary and secondary color points and the black point; a fourth table generation step of generating color separation data on a plurality of fourth lines each of which connects the primary and secondary color points; and an interpolation step of generating color separation data at grid points inside a three-

dimensional color space by an interpolation process  
based on the color separation data on the first to  
fourth lines, wherein the interpolation step includes a  
step of executing an interpolation process using a  
5 finite element method for each triangular plane  
specified on the color space.